

GUIDELINES FOR RHIC EXPERIMENTERS

RHIC PROJECT

I. SCOPE

The following guidelines are intended to list the Project ES&H requirements and define the responsibilities and hierarchy that govern the work areas where RHIC detector equipment is being assembled at BNL by users from other Departments or outside institutions.

II. RESPONSIBILITIES

- A. As defined in RHIC OPM 5.0.1.2, the respective Detector Project Director is responsible for all aspects of ES&H for the detector construction and operation. The Detector Project Director reports to the RHIC Associate Project Director for Detectors and Experiments. Each Detector Project Director shall appoint a Safety Coordinator.
- B. Each work area shall have an Activity Manager appointed by the Project Director of the respective experiment (BRAHMS, PHENIX, PHOBOS and STAR). The Activity Manager shall be responsible for monitoring the training requirements and safety procedures for the detector personnel working in the area.
- C. Each Building Manager is responsible for general facility safety in the building.
- D. Overall responsibility for training and ES&H procedures for each detector project lies with the detector Safety Coordinator.
- E. All non-BNL RHIC users shall obtain Guest appointments through the office of the Associate Director for High Energy and Nuclear Physics. Users from foreign countries requiring medical insurance and/or funding support must obtain the Research Collaborator appointment through the office of the Physics Department or the RHIC Project Office.

III. TRAINING

The Detector Safety Coordinator and Activity Manager shall determine the specific training needs by job assignment. The New Employee/Guest Orientation forms will be used as travelers to assure that the required training has been successfully completed. Most documented training at other DOE Laboratories is transferable.

- A. All users shall take the BNL General Employee Training course (GET).
- B. When working in radiation areas, handling radioactive material, or using radioactive sources, Radiological Training is required. If working on the AGS experimental floor, then AGS User Training is also mandatory. Challenge exams are offered for some courses at the RHIC and AGS Training offices and Safety and Health Services Division (S&HSD).
- C. Certification is required prior to using machine shop equipment. The certification is transferable from one BNL building to another. However, permission to use a particular machine shop must be obtained from the respective Building Manager or shop foreman.
- D. Certification for operating a crane or forklift will be offered to those individuals that show a specific need. A training course is given by SHSD which is then followed by field certification on the specific piece of equipment.
- E. Electrical safety training, may be required. A challenge exam is offered to those whose training expired.
- F. Training for handling hazardous chemicals and materials, Oxygen Deficiency Hazards and Working in Confined space is also available.

IV. REVIEWERS

- A. It is the responsibility of the respective detector groups to review the engineering designs of all equipment and apparatus that will be introduced into the various assembly areas away from the collision halls.
- B. The Detector Safety Coordinator shall inform, in writing, the cognizant ES&H Coordinator of the apparatus that is introduced into the building, describe its intended use, required procedures and the potential hazards - mechanical, electrical, radiation, or lasers, etc. - that may be encountered and any building modifications that may be necessary.

- C. The cognizant ES&H Coordinator shall decide whether additional safety reviews are required prior to starting work.
- D. All specialized lifting fixtures must be designed and tested to BNL and RHIC Project standards (see RHIC OPM 10.6).
- E. The above reviews are separate from those carried by the RHIC Experiment Safety Committee for all detector components that are slated for installation in the collision halls.
- F. Prior to initial operation of experimental apparatus in the collision halls, a formal Operations Readiness Review (ORR) is required. Formal written procedures and training may also be required.

V. MODE OF OPERATIONS

- A. While the responsibility for safety rests primarily with the individual users first, the Activity Manager assumes the day-to-day responsibility and, subsequently, the Building Manager is the arbiter for the activities in that building.
- B. Additional safety requirements may be necessary in specific areas and under certain conditions. This is the domain of the Building Manager and/or the cognizant ES&H Coordinator.
- C. The groups shall follow all the emergency procedures that are applicable to the specific building where the work is performed.
- D. The cognizant ES&H Coordinator shall conduct periodic inspections of the work areas. Any violations shall be written up and presented to the Activity Manager of the specific group. It is the responsibility of the latter to correct the infractions and notify the ES&H Coordinator of closure.
- E. Equipment testing in the Assembly Buildings or Collision Halls shall proceed only after a beneficial ORR has been performed and critical action items closed.

When RHIC does not have a standing watch, the experiments shall provide continuous shift coverage, if deemed necessary by the Experiment Safety Committee, when flammable gas is introduced (RHIC OPM 5.4.11.0) or the equipment is turned on; e.g., high voltage. One- or two-person shifts may be necessary (see RHIC OPM 5.1.16.0.1), depending on the potential hazards.

Emergency response procedures shall also be written to reflect the special circumstances where there is no standing watch.

- F. Visitors to the experimental collision halls and adjacent assembly buildings shall be escorted by authorized RHIC or experiment personnel and shall wear hard hats for the duration of the construction period.

VI. DOCUMENTATION

- A. The names of the ES&H Coordinator, Building Manager, Activity Manager, those who are crane certified and those who are machine shop certified shall be documented and displayed prominently in the respective working areas.
- B. Training documentation shall be included in the BTMS training data base for the purposes of tracking and issuing reminders for retraining, when the certification term expires.

APPROVED _____
Satoshi Ozaki
RHIC Project Director

6/14/99
DATE _____